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Scientific and Technical
Intelligence Committee

The Overt Collection of S & T Intelligence

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STIC-78-009
December 1978

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NOTE TO READERS

The Scientific and Technical Intelligence Committee (STIC) is the DCI Committee whose mission in part is to advise and assist the DCI with respect to production of intelligence on foreign sciences and technologies; to advise the National Foreign Intelligence Board; and to coordinate collection activity, information processing, and analyses in these areas. STIC reports to the DCI through his Deputy Director for National Foreign Assessment and to NFIB through the Board's Secretariat.

STIC assessment reports integrate analyses from components of the Intelligence Community and where appropriate present a unified view. Where a substantial difference of views exists, alternative interpretations and rationales are presented in italics.

The current STIC Chairman, members, and associate members are:

NAME	ORGANIZATION	
<div style="border: 1px solid black; width: 120px; height: 15px; margin-bottom: 5px;"></div> (Chairman)	Central Intelligence Agency	25X1
Ronald W. Ewing	Department of the Air Force	
<div style="border: 1px solid black; width: 120px; height: 15px; margin-bottom: 5px;"></div>	Central Intelligence Agency	25X1
Richard Haley	Defense Intelligence Agency	
Eldon B. Bissett	Department of the Army	
<div style="border: 1px solid black; width: 120px; height: 15px; margin-bottom: 5px;"></div>	Department of the Navy	25X1
Howard M. Wiedemann	National Security Agency	
Seymour Jeffery	Department of State	
Julio L. Torres	Department of Commerce	
Leonard R. Weisberg	Department of Energy	
	Office of Under Secretary of Defense for Research and Engineering	
William A. Whitaker	Defense Advanced Research Projects Agency	
<div style="border: 1px solid black; width: 120px; height: 15px; margin-bottom: 5px;"></div> (Executive Secretary)	Central Intelligence Agency	25X1

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The Overt Collection of S & T Intelligence

Summary

Purpose and Motivations for the Study

Scientific and technological analysis draws heavily on overtly collected information in producing finished intelligence for national security and foreign policy users. Trends in the last few years have tended to increase the importance of the overt collection of S&T intelligence. An increasing number of intelligence tasks and requests have been levied upon the Intelligence Community by the National Security Council (NSC), the President's Science Adviser, the Departments of State and Defense, and others that require more complete and timely S&T reporting than is possible from technical or clandestine collection alone. The Intelligence Community is not well organized for either orderly collection and reporting of overt S&T information or for processing of this information prior to its receipt by analysts.

In recognition of the need for improvement in overt S&T collection,¹ the Scientific and Technical Intelligence Committee (STIC) in 1977 formed a Working Group (see annex A for membership) to study the capabilities of the US Government for overt S&T collection and reporting, and the ways that these capabilities might be improved. The report of the Working Group is comprehensive and is being published separately.² STIC has selected a number of general and specific conclusions it believes should be highlighted for Intelligence Community (IC) managers and planners. These selected conclusions, together with some recommendations for action by various community elements, constitute the present report.

Major Conclusions

The major conclusions of this report are:

- The US Government's potential for reporting on foreign scientific and technological developments relevant to US national interests is high, but that potential is presently not being fully realized.

¹ Overt S&T collection consists of the acquisition of intelligence information from public media, observation, government-to-government dialogues, elicitation, and sharing of data already acquired. The

² Annex B contains a summary of all recommendations by the Working Group.

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- The needs of national security consumers and policymakers regarding foreign S&T developments and issues are not being systematically identified and fully articulated to field collectors and reporters, particularly those abroad.
- The basic problems affecting overt S&T collection and reporting are systemic; an increasing amount of foreign S&T information is being collected and reported, but the relevance of that information to the needs of national security and foreign policy consumers remains low.
- The principal overt collectors abroad—the State Department and the Department of Defense (DoD)—do not regularly report on foreign S&T developments of national intelligence interest. 25X1
- Several important overt sources available through IC organizations are not being fully exploited for S&T intelligence [redacted] 25X1
[redacted]
- Intelligence analysts remain generally uninformed regarding the overt collection systems and, consequently, do not effectively utilize the full potential of the foreign S&T reporting capability that does exist. [redacted] 25X1

Implications for Policymakers and Intelligence Analysis

The continued inadequate collection and exploitation of overt S&T intelligence by the Intelligence Community would portend limited, and possibly reduced, national intelligence capabilities to adequately support national policymakers. Improvements in the overt collection system are needed, but the nature and extent of the required changes are subject to bureaucratic as well as practical constraints. The adverse implications of failure to adequately use and/or improve overt collection are serious:

- *For policymakers*, these implications include the possibility that major US policies may be formulated on an incomplete or weak understanding of foreign S&T capabilities, and US negotiators may be unable to take advantage of US scientific and technological strength in international negotiations.
- *For the analytical community*, the implications include a possible excessive and increasing amount of analytical manpower being spent sifting the growing volume of low-relevance overt material, and the attendant costs and political risks resulting from increased use of the more responsive technical and clandestine collection systems [redacted] 25X1

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STIC Actions and Recommendations

This report concludes that key functions must be established or improved if the IC is to utilize fully the various US Government organizations to acquire overtly foreign S&T information on issues of national interest.

- *The needs of national security consumers and policymakers for foreign S&T information should be systematically identified and communicated to field collectors.*

- STIC plans to perform this function by formulating collection guides in selected S&T areas and by providing field collectors with timely collection guidance.

- *The establishment of a coordinated collection tasking system including common tasking, priorities, reporting and feedback processes would enhance overt reporting on foreign S&T developments. No overt collection system, per se, exists. STIC recommends that the appropriate IC components (identified specifically later in this report) take the following actions:*

- Implement the DCI's overall planning responsibilities for overt collection (NSCID-2) so that both IC collectors and advisory-tasking reporters are fully informed on national S&T intelligence needs.

- Establish a uniform collection requirement and guidance system for both IC and non-IC (advisory-tasking) collectors and reporters.

Provide analytical feedback to all overt collectors and reporters from the IC consumers in a way that recognizes and rewards all US Government organizations for their contribution to the national intelligence and national security organizations.

- *The analytical community should provide more explicit collection guidance on difficult technical subjects and more customer-tailored collection tasking on national-level S&T issues so that collectors and reporters can better direct their efforts. This would make more effective use of existing IC overt collection resources (for example, [redacted] and non-IC reporting through the State Department (NSCID-2). In addition, the overt S&T reporting responsibilities of State and Defense must be clarified regarding national intelligence reporting; field-level reporting coordination should be provided to ensure adequate S&T coverage and no unplanned duplication. STIC recommends the following actions:*

- NFIB member organizations should task the various overt collectors more explicitly, tailoring their collection requests to the collectors' technical expertise and/or sources (for example, [redacted]).

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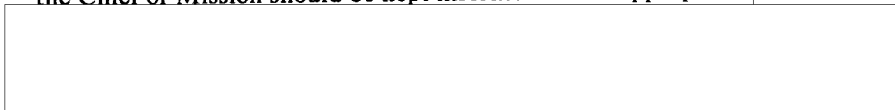
—CIA, DIA, and State, with assistance from the Human Resources Committee (HRC), should develop orientation and training courses for both reporting and analytical personnel on various overt collection systems and their S&T reporting potential.

—The NFIB should encourage both IC collection and production organizations to offer technically qualified manpower on a temporary basis to State and Defense units abroad as a practical means of enhancing non-IC reporting on national-level S&T intelligence topics.

—Chiefs of Mission should be encouraged to establish full coordination among all US Government S&T reporting elements within their country of accreditation (other than those under US area military commanders), based on the overall S&T reporting guidance and the national intelligence requirements provided to the mission; DoD overt S&T collectors abroad which are not under the Chief of Mission should be kept informed where appropriate.

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The Overt Collection of S & T Intelligence

Purpose and Motivations for the Study

Over the last several years there has been an increasing number of requests by the National Security Council (NSC), the President's Science Adviser, the Departments of State and Defense, and others for intelligence assessments that involve analyzing foreign S&T developments. These requests cover a wide range of topics: international technology transfers and their economic and military implications; foreign science policies and programs; and research and development (R&D) activities in various fields and their economic, political, and military implications for the United States. These requests have included assessments of S&T developments in such diverse subject areas as nonnuclear energy, food and population, communications, transportation, materials, genetic engineering, and future military weapons technologies. [redacted]

[redacted] can provide only limited inputs toward answering such requests; and these sources are vulnerable to actions by foreign countries that could negate US collection efforts (for example, [redacted])

[redacted] most of the programmatic and technical data required to produce foreign technology assessments are available from overt collection sources. [redacted]

There is every indication that even more and better overt S&T reporting will be required in the future. Policies of the US Government concerning the use of its own science and technology, particularly in support of its foreign policy, have grown rapidly in the last few years. The declared use of US technological superiority to achieve foreign policy objectives with the USSR (PRM-10/PD-18) and the formulation, conduct, and

renewal of S&T agreements with the USSR, China, and Japan are examples of this trend. Development of the US Government's North-South technology transfer policy (PRM-33), including preparations for the 1979 UN Conference on S&T for Development, is an example of the broadening needs of policymakers for multidisciplinary (scientific, economic, and political) intelligence support. [redacted]

STIC firmly believes that the cogent evaluation of foreign S&T developments provides one of the best intelligence indicators of a country's intentions and its future capabilities in the military and economic spheres. Foreign government commitments to major national S&T programs such as space, communications, energy, and defense can be assessed in terms of future trade competition, military capabilities, energy dependence, and conflicts with US diplomatic objectives. The Intelligence Community recognized the importance of foreign S&T developments in 1974 in the DCI's Perspectives 1975-80:

"The acceleration of events will be characteristic of the years ahead. . . . Such changes will occur most conspicuously in the fields of science and technology, but the pace there will have substantial effects on the pace of sociological, industrial, and institutional change, with the resultant political, military, and economic impacts. Identification and accurate assessment of such changes and their effects will be needed on an increasingly rapid or even immediate basis." [redacted]

Science and technology today, more than ever before, are international endeavors. Discovery and development of advanced S&T are very visible events, which, when properly identified and accurately assessed, provide measurable indications of their potential economic and military impact. Accurate and timely

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assessments of foreign S&T developments, therefore, require competent and continuous reporting of both programmatic and technical data [redacted]

General Conclusions and Implications

1. *The US Government's potential for reporting on foreign science and technology developments of national security interest is high, but that potential is presently not being fully realized.*

- Intelligence Community organizations have not organized the complex overt collection systems or coordinated their foreign intelligence reporting. As a consequence, they are unable to direct and exploit effectively the many technically qualified government personnel who are capable of reporting on S&T developments affecting US national security. The accompanying chart provides an overall view of the various organizations involved in overt S&T collection and reporting and some sense of the flow of collection requirements and collected information. [redacted]

2. *The basic problems affecting overt S&T collection are mainly systemic.* Several functional deficiencies lead to this conclusion.

- Most reporting and collection units appear to be doing their jobs well, but as a whole overt S&T reporting does not appear to be meeting the needs of the Intelligence Community on national-level issues.
- Each reporting entity has assigned missions directly related to its organizational affiliation. In addition, most entities are in fact reporting on what they perceive to be national-level intelligence—yet few have received clearly defined national-level or interagency requirements (for example, KIQ/NITs or NSC requests).
- There is little cooperation or coordination among overt reporters and intelligence collectors—in fact, they often do not know what the other is collecting, and do not share reports and operational plans and for the most part [redacted] there is no effort to plan and carry out overt collection and reporting jointly.

- The feedback system, as it now exists for national-level S&T issues, provides essentially no collection guidance to the field collectors. State reporters receive little or no feedback and DoD field collectors, while having some 20 percent of their reports evaluated by DIA, could use improved substantive feedback on technically complex subjects. [redacted]

3. *The problems associated with overtly collected S&T information appear to be mainly qualitative, not quantitative.* The “system” appears to be producing an increasing amount of foreign S&T information, although the percentage of reporting relevant to national-level consumers’ interests is uneven and low. Improvements in the overt S&T collection should focus on factors affecting its effectiveness and the relevance of its reporting to national-level consumer needs and not on production efficiency.

- DoD and CIA alone produced over [redacted] overt S&T reports in 1977 and State contributed an additional [redacted] substantive field reports. Open literature, foreign publications, and other media sources contributed an increasing amount of foreign S&T information but with little guidance and selectivity being provided by the IC’s analytical consumers. An important body of foreign official S&T information, however, is not forwarded regularly to the United States because either interests are not known or the information is not transmitted through the normal flow of foreign documentary information.

- In contrast with the STIC Working Group’s general findings regarding the broad technical coverage and high quality of S&T field collection, the uses made by both DIA and CIA of the various sources of foreign overt S&T information in the preparation of finished national-level intelligence differ greatly.

- Although the total number of technically qualified and dedicated reporters abroad is small,³ this does not

³ State has about [redacted] scientific counselors and attaches posted abroad who have scientific or technical backgrounds and, as a general rule, they devote only [redacted] percent of their time to reporting. DoD’s dedicated S&T reporting is generally confined to the foreign detachments of the Army/ESTC, Air Force/FTD, and Navy/NIC. These units have some [redacted] technically qualified collectors abroad, [redacted] and their reporting is mainly in response to service and command needs [redacted]

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appear to be an overriding factor in the *quantity* of S&T reporting. For example, over one-third of State's field reports came from posts with no scientific attaches and over 27 percent [] of DoD's S&T reports came from defense attaches. The *technical quality* of S&T reporting, however, does appear to be adversely affected by the limited number of S&T-qualified personnel available to assist in report writing or to serve as technical consultants. There is too little interaction between technically qualified and non-technical reporters with the result that cooperation among them is uneven and insufficient to ensure high-quality technical reporting. The total number of overt collectors and S&T reporters appears to be adequate but the proportion of technical and nontechnical personnel appears not to be optimal. []

4. *The environment for overt collection abroad has become more difficult for S&T collectors, particularly those without foreign language capabilities and legitimate technical responsibilities.* Both political pressure and increased industrial security [] have contributed to this situation. []

These general conclusions have significant implications not only for the overt collectors and reporters but also for the national intelligence consumer and for the intelligence analytical community, which provides the interface between the field collectors and the policymakers. []

For the national intelligence consumer, deficiencies in S&T reporting could:

- Result in major US policies being predicated on incomplete or weak understanding of foreign S&T capabilities, particularly those of the USSR and China.
- Limit the US Government's ability to exploit fully US scientific and technical strengths in international negotiations in such complex fields as arms limitation, energy, telecommunications, space, and technology transfer.
- Contribute to inaccurate assessments of foreign military and industrial capabilities in areas of advanced S&T fields (for example, semiconductors and

genetic engineering) which, in turn, could adversely affect future US defense, diplomatic, and trade interests. []

For the analytical community, these deficiencies have equally serious implications:

- S&T analysts in the IC must spend an increasing amount of time sifting through the growing amount of overt reporting and open-source literature to find the relatively small amount of S&T information relevant to the needs of the national-level consumers; alternatively, the analysts may not use the information at all.
- Continued poor use of available overt collection resources—mainly because of ignorance on the part of analysts as to how the present system works—could lead to a “drying up” of overt sources and thus to a further reduction of potentially useful foreign S&T information.
- The relatively small amount of relevant S&T intelligence being provided by overt sources can lead, and has led, to increased reliance on the more “responsive” collectors (that is, technical and clandestine collectors) with their greater costs and political risks. []

Specific Conclusions and Recommendations

STIC has selected from the Working Group recommendations, listed in annex B, the following ones which it considers key to improved overt reporting as a whole and which it can help to implement. Some of these affect other NFIB entities, and STIC urges these organizations to give prompt attention to their acceptance because of their interdependence to the anticipated STIC actions. []

1. *The needs of national-level consumers for foreign S&T intelligence are not being identified systematically and communicated to field collectors and reporters, particularly those abroad.*

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- STIC will take action to ensure that the priority S&T needs of national-level consumers are identified and that field collectors are provided with timely collection guidance on selected prioritized national-level S&T issues. [redacted]

2. *The different collection requirements and tasking systems of CIA, DIA, and State have led to diverse and uncoordinated use of overt field collectors and reporters, with the result that foreign S&T reporting does not always present an objective and complete view of foreign S&T developments.*

- *The Collection Tasking Staff* should, with the *Human Resources Committee* (HRC), establish standardized procedures and guidelines for the formulation, acceptance, and tasking of national-level S&T collection requirements for overt collectors and reporters of IC organizations and for advisory tasking of non-IC organizations.

- *NFIB production organizations* are urged to develop comprehensive and balanced S&T collection tasks on identified national-level issues rather than leaving their formulation to individual analysts.

- *CIA, DIA, and State analytical groups* are urged to develop, with the assistance of *STIC* and the *HRC*, a more responsive feedback system on national-level issues for all overt S&T collectors and reporters abroad; this feedback should recognize and reward all US Government organizations for their contribution to the national intelligence and national security communities. [redacted]

[redacted]

- *DIA*, with assistance from *CIA* [redacted] either through the sponsoring [redacted]

Defense organizations or through the military domestic collection organizations—should obtain and disseminate reports of specific intelligence interest prepared by such organizations as the Army's European Research Organization and the Air Force's European Office of Aerospace Research and Development, and [redacted]

- *State*, with assistance [redacted] should selectively disseminate to interested IC components such material as working group papers, reports of delegations, trip reports, unpublished documents and items of S&T intelligence interest prepared by groups and individuals [redacted]

- *DCD* and *DIA* should, through existing or new mechanisms, coordinate the domestic collection of foreign S&T intelligence and ensure that the reporting potential of both civilian and military NFIB member organizations and non-NFIB government organizations are being fully realized [redacted]

4. *The principal overt S&T collectors abroad—State and DoD—do not regularly report on foreign S&T developments of national intelligence interest.* State, with primary responsibility under NSCID-2 for overt S&T reporting abroad, has not been provided overall guidance or priorities on S&T subjects by the Intelligence Community. DoD, which is given explicit NSCID authority to collect foreign S&T intelligence in support of its own mission, does not have clearly delineated S&T reporting responsibilities for inter-agency consumers, particularly the Intelligence Community. *S&T collection coordination between State and DoD units abroad is virtually nonexistent.*

- The *DCI* should ensure that the appropriate planning for foreign overt collection against national-level S&T requirements has been conducted and that all collectors [redacted] involved have been properly informed.

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- The **NFIB** should provide appropriate assistance to State to achieve better coverage of foreign S&T subjects of national intelligence concern, including: identification of national-level requirements and priorities; S&T reporting guidance and feedback; and, as appropriate, technically qualified manpower to supplement State's limited overseas reporting resources.

- **State** should encourage selected US missions overseas to take appropriate steps to ensure proper coverage and coordination by all overt S&T reporting components under that mission; in this connection the efforts [redacted] appear to be quite promising. DoD overt S&T collectors abroad which are not under the Chief of Mission should be kept informed where appropriate.

- The **DCI** and the **Secretary of Defense** should clarify DoD's national-level S&T reporting responsibilities; DIA should ensure that DoD overt S&T reporting on national-level issues is properly balanced among departmental, service, and command needs.

- **DIA** should establish a field-level S&T coordinator in Europe for the purpose of coordinating overt collection by DoD's dedicated S&T intelligence collectors (that is, FTD, NIC, and FSTC) and contributing S&T intelligence collectors (for example, defense attaches, and military intelligence units [redacted]).

5. *Several Intelligence Community sources are not being fully exploited for S&T intelligence—that is,*

[redacted]
explicit S&T collection requirements and guidance.

[redacted]
reporting than is now being realized; this component is

not generally recognized by the IC's analytical community as a "taskable" collector [redacted]

[redacted] The IC's Foreign Publications Procurement Program currently provides little S&T information that is not specifically requested by analytical consumers; that which is requested is covered quite well.

- **STIC** plans to encourage formal tasking of FBIS and the Foreign Publication Procurement Program for foreign S&T information. [redacted]

- The **HRC**, in conjunction with **CIA**, should conduct a thorough survey of the S&T reporting capabilities of [redacted]

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- **The HRC's Orientation Training Advisory Group** should initiate development of orientation and training courses on the various overt collection systems; these courses should be developed with the help of, and for the benefit of, CIA, DIA, and State.

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6. *The Intelligence Community is not systematically*



assigned this responsibility for national security purposes.

- The **DCI** should establish a collection program



- **CIA, DIA, and State training schools** should develop training courses or portions of courses:

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—For overt collectors and reporters with limited technical backgrounds (for example, Defense attaches and State's economic and commercial officers).

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7. *The Intelligence Community's analytical personnel remain generally uninformed regarding overt collectors and reporters and as a consequence do not utilize effectively the full potential of the S&T reporting capability that does exist. The lack of an educational program in the IC on overt collectors and the requirements and tasking process has generally contributed to this condition.*

—On the basic differences between overt and


tion of appropriate collection requirements and guidance.

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Secret**Annex A *****Membership of
the Steering Group**Chairman, COMEX
Chairman, HRC
Chairman, STICEloise Page
Chairman, CCPC
Director S&T, DIA

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**Membership of the
STIC Overt S & T Collection
Working Group****Members****Functional Representation
(Relevant Experience)**

CIA

**Working Group Chairman**Special Assistant, Physical Sciences
and Technology Division
Office of Scientific Intelligence

—Analytical and Consumer Representative



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D/Chief, Life Sciences Division
Office of Scientific Intelligence

DIA

Chief, HUMINT Requirements Activities,
DC-4A

—DoD Requirements and Tasking

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Policy & Program Division (AH-1)
Directorate for Defense Attache System—Defense Attache Program
(US Army HUMINT Program)

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Chief, HUMINT Operations, DC-4

—DoD Collectors
(DoD field collector in Europe)

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Members	Functional Representation (Relevant Experience)
<div data-bbox="168 436 483 499" style="border: 1px solid black; height: 30px; width: 194px;"></div> <p>Directorate of Scientific and Technical Intelligence</p>	<p>—Analytical Representative (FSTC field collector in Europe)</p>
<p>STATE</p> <p>Carol C. Moor Office of Intelligence Liaison/INR</p>	<p>—Intelligence Requirements (Political Officer, Former Assistant to the Ambassador to Japan)</p>
<p>George Younts Bureau of Oceans, International Environment and Scientific Affairs</p>	<p>—Science Attache Program (Science Attache to Israel 1975-77)</p>
<p>Howard M. Wiedemann INR, Member of STIC</p>	<p>—Analytical Representation and STIC liaison</p>
<p>HUMAN RESOURCES COMMITTEE (HRC)</p> <div data-bbox="168 1024 462 1077" style="border: 1px solid black; height: 25px; width: 181px;"></div>	<p>—HUMINT Collection Activities & Chairman of Orientation & Training Advisory Group</p> <div data-bbox="831 1096 1459 1148" style="border: 1px solid black; height: 25px; width: 387px;"></div>

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Annex B ⁵Recommendations of the
STIC Working Group

Requirements, Guidance, and Priorities

*1. *STIC* should seek to ensure that the priority S&T needs of national-level consumers are identified, translated by NFIB production organizations into intelligence collection requirements, and properly communicated to field collectors. *STIC* also should ensure that field collectors are provided with timely collection guidance on national-level S&T issues; this guidance should include both substantive technical guidance and information on customer needs and their priorities in relation to other national-level intelligence needs.

*2. The *Collection Tasking Staff* should, with the *HRC*, establish standardized procedures and guidelines for the formulation, acceptance, and tasking of national-level S&T collection requirements for IC overt collectors and reporters and for advisory tasking of non-IC organizations; it is recognized the National Intelligence Tasking Center (NITC) may also address this problem, but the Working Group feels that the *HRC* with its experience and membership can probably provide the most timely and pertinent corrective measures.

*3. As appropriate, *NFIB production organizations* should be encouraged to develop comprehensive and balanced S&T collection tasks on identified national-level issues rather than leaving their construction to individual analysts. *NFIB production organizations* also should be encouraged to develop special S&T collection tasks for the different levels of technically qualified overt collectors and, especially, for the differing types of collection operations. that is

* These Working Group recommendations are those highlighted by *STIC*.

4. Based on the identification of national-level S&T needs and in collaboration with national-level S&T consumers, *State* should develop a separate section on S&T reporting for its Foreign Affairs Manual; *STIC* should provide assistance regarding national intelligence needs. Consideration should be given by *State* to establishing a counterpart to the Combined Economic Reporting Program (CERP) for S&T reporting from missions.

*5. *IC consumers—NFAC, DIA, DoE, and the services—*of State, DoD, and non-IC government S&T reporting should provide analytical feedback on individual reports when requested and on a periodic basis to ensure that the reporting is relevant and not duplicative of other overt reporting sources. The *requirements and tasking units of CIA, DIA, and State* are urged to develop, with the assistance of *STIC* and the *HRC* a more responsive analytical feedback system on national-level issues for all overt S&T collectors and reporters.

6. *NFIB production organizations* should be encouraged to send S&T analysts working in areas of high national interest on field trips to meet with selected collectors [redacted] one of the most effective means of conveying S&T guidance and feedback is via analysts' trips and/or short-term assignments to field collection units.

8. The *requirements and tasking organizations of CIA, DIA, and State* should periodically make field

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surveys [redacted] in order to acquaint themselves with the changing operational capabilities and collection environment; full utilization of overt collectors of S&T intelligence is closely linked to the operational knowledge of the tasking elements.

Domestic Collection

*1. A variety of written materials ranging from unpublished studies to working group papers and trip reports are prepared by various government agencies abroad but not always provided or made available to the Intelligence Community. To facilitate Intelligence Community access to these documents, the following steps are recommended:

- Arrangements should be made by *DIA*, [redacted] either through the sponsoring Defense organizations or through the military domestic collection organizations, to obtain and disseminate reports of specific intelligence interest prepared by such organizations as the Army's European Research Organization and the Air Force's European Office of Aerospace Research and Development, and by DoD in execution of the Defense Exchange Agreements with foreign countries.

- A similar mechanism should be established in the *State Department* to disseminate selectively or provide information to the IC [redacted]

*3 [redacted] *DIA* should establish a mechanism to coordinate the [redacted] collection of foreign S&T intelligence and to ensure that the reporting potential of both civilian and military NFIB member organizations and non-NFIB US Government organizations is being fully realized [redacted] collection units for national intelligence purposes. To this end *IC analytical organizations (CIA, DIA, and the services)* should assign technically trained officers [redacted] for periods of at least one to two years.

4 [redacted] *DIA* should take the initiative in focusing the IC's [redacted] program on national-level S&T requirements; this effort should include a general raising of the analytical community's awareness of [redacted] and its capabilities to satisfy analytical requirements.

6. *Navy* should fulfill its domestic collection responsibilities in accordance with DCID 2/8; or take advantage of the provisions of DCID 2/3, which allow: participation in Intelligence Community collection programs; [redacted]

Foreign Collection

*1. Pursuant to NSCID 2, the *DCI* should ensure that appropriate planning for foreign collection of S&T intelligence to satisfy national-level requirements has been performed and that S&T intelligence collection and reporting are conducted so as to avoid undesirable duplication and uncoordinated overlap but provide adequate coverage for national security purposes. To [redacted]

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*2. The *NFIB* should provide appropriate assistance to State to achieve better coverage of foreign S&T subjects of national security concern, including: identification of national-level requirements and priorities; S&T reporting guidance and feedback; and, as appropriate, technically qualified manpower to supplement State's limited overseas reporting resources.

*3. *State* should encourage selected US missions overseas to take appropriate steps to ensure proper coverage and coordination by all S&T reporting components under that mission; in this connection the efforts [redacted] toward an S&T "country team" approach appear to be quite promising. DoD overt S&T collectors abroad who are not serving under the Chief of Mission should be kept informed as appropriate.

*4. The *DCI* and the *Secretary of Defense* should clarify DoD's national-level S&T reporting responsibilities. *DIA* should take appropriate action to ensure that DoD overt S&T reporting on national-level issues is properly balanced among department, service, and command needs. Because of DoD's high interest in worldwide S&T developments and because of the specific assigned S&T collection responsibilities in NSCID-2 and E.O. 12036 regarding departmental needs, *DIA* should participate in the formulation and balanced tasking of all national-level S&T requirements.

*5. *DIA* should establish a field-level S&T coordinator in Europe for coordinating collection operations against national-level S&T requirements and ensuring that the capabilities of DoD's dedicated and contributing S&T collectors are being jointly used to optimize the S&T reporting of both. To facilitate this field support function, *DIA* should establish a counterpart action officer at headquarters to provide continuing substantive and operational guidance; this support should also be provided to DoD collectors in the Far East, possibly through one of the dedicated S&T collection unit [redacted]

6. *DoD field collectors* should be urged to make the following changes, adjustments, and/or additions in order to improve S&T reporting:

- External research funding should be provided to DoD's dedicated S&T collectors so that they may contract for foreign technical studies with foreign firms and research organizations, and for the purpose

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*2. Similarly, both formal tasking and collection guidance on S&T subjects must be used to exploit fully the US Government's Foreign Publications Procurement Program (FPPP). *CIA and DIA tasking organizations* should ensure that all requests for foreign S&T publications be coordinated with State/INR/P (FPPP) before validating such requests.

3. In order to improve FPPP initiative concerning procurement of S&T documents, *State/INR/P* should consider taking the following actions:

- Request all Publication Procurement Officers (PPOs) to use science attaches, where available, or technically qualified military officers (for example, FTD officers) as S&T referants in the procurement of technical documents.
- Consider sending S&T analysts on temporary duty to selected posts abroad to work with PPOs in the actual selection and procurement of technical documents; such assignments should be made according to the analysts' geographic areas of interest.
- Develop a working arrangement with the Department of Commerce's National Technical Information Service for the use of its foreign-based personnel as S&T referants for PPOs.

6. *CIA and DIA* should provide orientation and training to foreign service officers assigned PPO responsibilities abroad; a training package could be developed for PPOs abroad who are not available for training in the United States.

arrangement with the Department of Commerce's National Technical Information Service to enhance the acquisition of foreign S&T information for the Intelligence Community through Commerce's foreign acquisition efforts.

9. *State* should encourage science attaches abroad to provide professional advice to PPOs on the purchase of S&T publications; PPOs should also be encouraged to assist science attaches in the transmittal of routine foreign S&T reports acquired by the attaches back to the Washington community.

Training Courses on Overt Collection Capabilities

*1. The *HRC's Orientation Training Advisory Group (OTAG)* should ensure the development of appropriate orientation and training courses on the various overt collectors, their capabilities and limitations, and the requirements and tasking mechanisms available for IC production organizations. These courses should be developed with, and for the use of, CIA, DIA, and State. Consideration should also be given to holding joint collector-producer training sessions so that both may develop a firsthand understanding of the other's professional capabilities. It is to be noted that the Department of Energy has taken steps along this line by establishing courses on nuclear proliferation for IC collectors.

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***2. *CIA, DIA, and State training schools* should be encouraged to develop and conduct S&T orientation courses for overt collectors and reporters who have only limited technical backgrounds, for example, defense attaches and economic officers who are to be assigned S&T responsibilities in the field.**

the construction of collection requirements for these two very different types of collection. *CIA and DIA training schools* should consider development of specific short courses or portions of courses for this purpose.

***3. The *HRC's OTAG* should work into its training courses**

educating IC analysts regarding

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